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F. H. Knowlton
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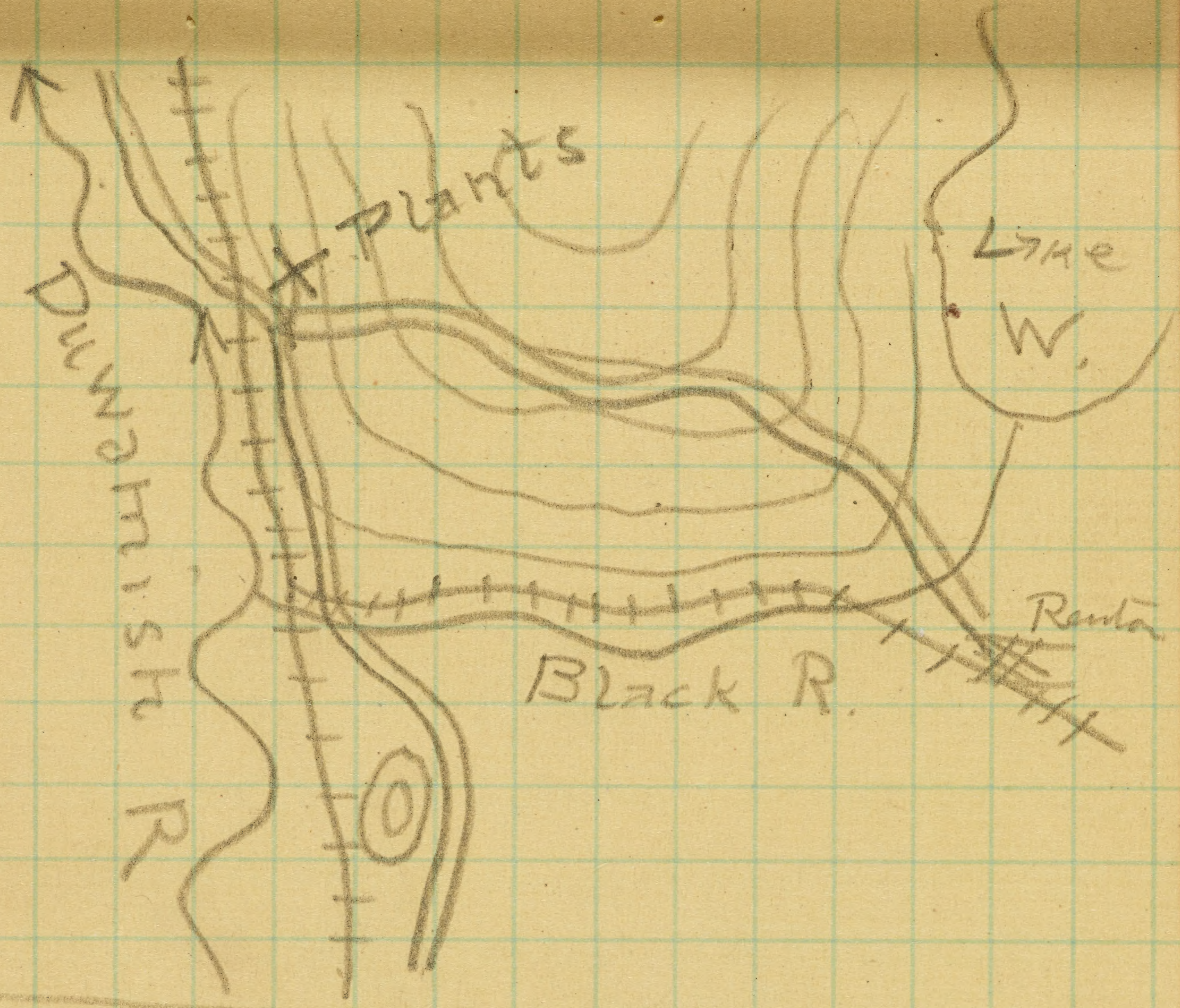
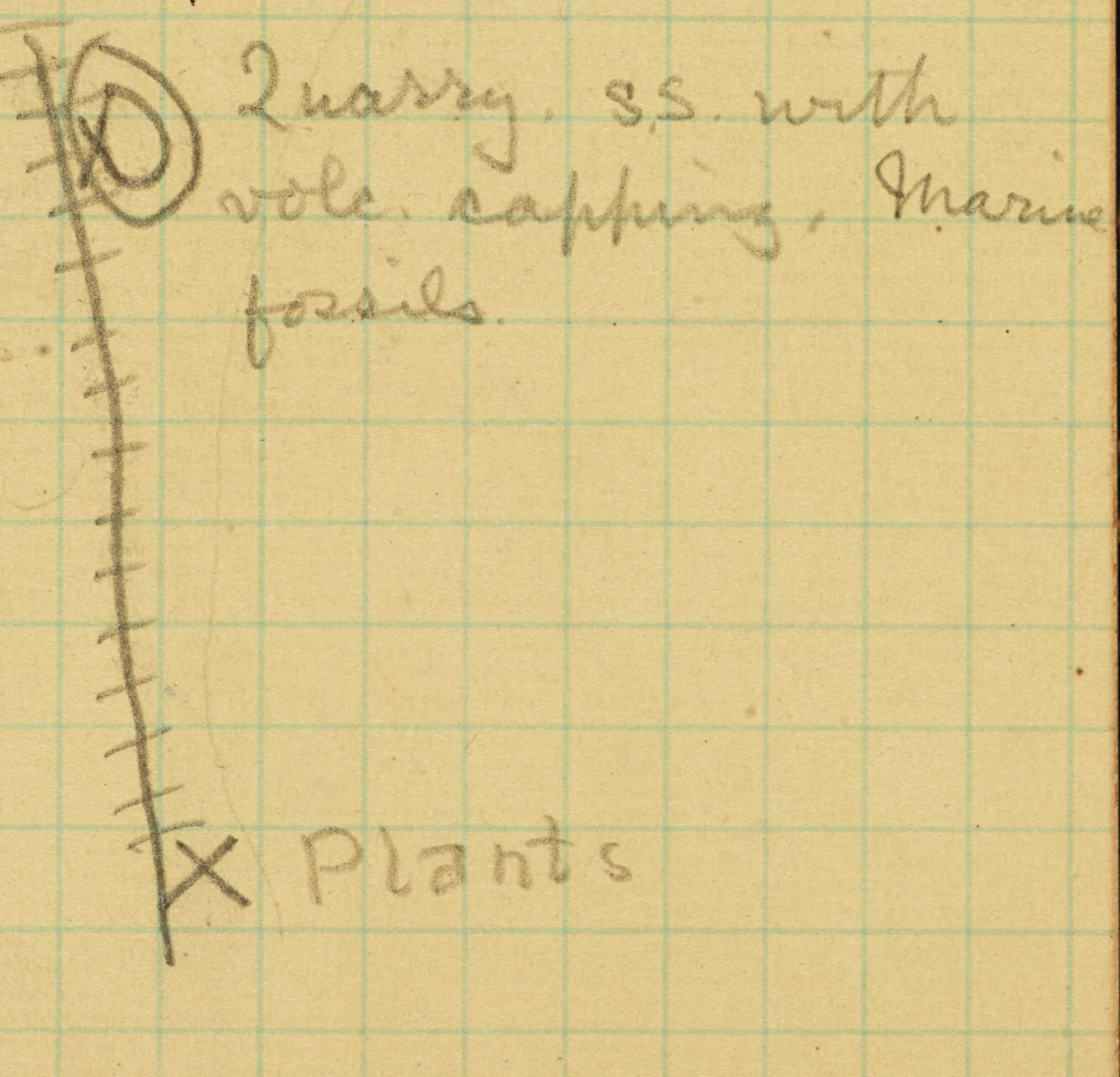
D. C.


X Plants
Duwamish R
Lake W.
Renton
Black R.


Quarry. s.s. with volc. capping. Marine fossils.

July 17. 1898

Reached Liberty this noon. Came about 1½ miles north to where there are old placer workings. The slate bed-rock is exposed standing at an angle of about 45°, & splits readily and contains many plants, Palms are very abundant; also my new Lygodium.

In the afternoon went up on the mountain to the west of the 'arrestra' wheel and at a point 425 above the stream and on the same dip found a layer at least 1 foot in thickness that is a complete mass of palm-leaves. The stem is nearly one inch in diameter and probably the rays were at least five or six feet across. Collected several fine specimens.

July 18-
Collected all day from the slate rock in the floor of the placer working. Got some very good things. probably 10 specimens.

Just before going home went to top of hill where the sand box is located and looked for plants in the sandstone but found no traces.

July 19-
Collected from various places in the placer working. Found several fine specimens of a Eucalyptus

Packed up material and carried it over on top of the bank.

July 20
Koch came up and we boxed up the specimens and returned to camp at Masterson's ranch.

July 21.
Smith and Cutler came in this evening about 6^{30} Are going out as soon as possible.

July 22 -
Came in to Cle Elum this afternoon bringing fossils and my complete outfit.

July 23.
Visited the Cle Elum mine just south of the town. Examined the dumps and found tons of plants but none

of value. Hope to get a workman to bring some out of the mine for me. The mine is 650 feet deep.

Feb 25.

Went to see about getting miner to bring out some plants from the Cle Elum mine, was told that the place where the plants came from was blocked up and could not be reached.

Went up the gulch about 2 miles to a small mine but found it closed and locked & no one around. The dump was very small and all broken pieces of coal & no rocks. Got nothing from there.

July 29 –

Visited Roslyn today, Found ~~that~~ the coal Co. was opening a new mine (called Shaft No 4) below the one now worked. It is to be a large mine & is 650 feet deep to a large body of very fine coal, they are taking out only rock and fixing things to take out a large quantity of coal in the near future.

The rock is full of plants, worked over the whole of the large dump and obtained a fine and probably very complete representation of the flora. Number of species not large but very interesting as I note similar that those seen from most of the Cascades.

July 30
Spent the day working on the dump of No 4 or Kirby m Collecting until I am certain I have a full complement of species. Perhaps the most abundant form is my new Eucalyptus described I think from Franklin. There are also large numbers of a small willow-like leaf

In the afternoon packed up what I had collected, 4 boxes.

Aug. 1.
Re-packed and boxed the Liberty-plants. They make four boxes (Nos 1-4) and weigh 410 lbs.

Aug. 2
Went up to Roslyn and brought down the boxes collected there. Weight 365 lbs. (Nos 5-8)
Shipped the whole lot, weight 775 lbs.

Aug 4-
Reached So. Prairie at 7 oc.
Went up. to Burnett and met the manager Mr Chas. Burnett.
Went up to the mine and spent the day in working over the dump from No 4 mine. The rock which is

4 Thurs.
5 Fri
6 Sat
7 Sun

comes from the mine is hard and difficult to break, but after it has been exposed for a few weeks or months it splits up so readily that it is difficult to save the plants. By working carefully I was able to get out what seems to be a fair representation of the flora. The number of species is small, probably not more than 10. Found a single fragment of a palm. Several fine examples of a magnolia and a large number of small narrow willow-like leaves. Also noted and collected specimens of a very large Equisetum-like plant with stems about 3 inches in diameter.

Aug. 5.

Spent the day in working over the dumps and now have a full complement of all that is found here. In the afternoon went up the canon to the stone quarry. Found no traces of vegetation.

Aug. 6 -

Spent the forenoon in going up the Canon about 3 miles visited several now abandoned coal mines, the largest being the Ochre mine. As it has been several years since any of them have been worked the dumps have all sloked down & couldn't get a trace of plants.

Aug 9 –

Began this morning in the Carbon River canon, but first up to the vicinity of the dam and soon found two localities a few rods from the mouth of the new opening which is to be called No 8. The rock is very hard and the plants scarce. Found perhaps ten species one of which is a Populus like the species from Franklin. The others are poor.

In the afternoon went down to the bunkers and on the way back found a splendid lot of plants at the upper end of the long tunnel. Great abundance of the fern obtained by Mr Willis; also good number of dicotyledons.

among them a Ficus
of large size and appar-
ently similar to one from
Franklin.

Aug. 10.
Just at the machine shop found another lot of plants similar in most respects to the ones last mentioned. Also collected a few at one or two points beyond this cut below no 4. mine.
One new form is interesting inasmuch as it has several branches, the other always being in single fronds with no indication of their being compounded.
Just below No 4 found a few plants in a hard bluish rock. The

most conspicuous was a long monocotyledonous leaf like a Typha. It was an inch or more broad and I obtained a piece, showing the tip, at least 15 inches long.

Aug. 11.

Went down the cañon for about half a mile below the bunkers. Found no traces of plants, nor could I find the shell-bed which is said to occur just through the little tunnel on the R.R. track.

After noon went up the cañon above the dam until the road turned off into the timber. Found a single poor locality about 100 yards above the dam. The strata stand

many critical. The
plant most remarkable
was a small three-lobed
leaf very like a Dakota
group Sassafras-

Aug. 12.
Spent the entire day in
packing up and shipping
the plants collected.
They fill 4 boxes and
weigh 325 pounds.

Aug. 13.
Came to Wilkeson this
morning. Began at
once on the dump from
the mine. Was disap-
pointed in only finding
a very few plants. These
poor as they are seem to
be different from those
of Carbonado.

In the afternoon found
a fine lot of things up
the track about 1/4 of a
mile above the active
mine. It was the dump
from an opening made
about 9 years ago while
seeking for fire clay.
The so-called slate rock
was taken out and ground
up and made into brick
but when burned the whole
thing, furnace and all,
melted and ran together.
The leaves are in the
greatest of abundance and
most of them are very
perfect. They seem to be
similar to those described
or figured in the Newberry
plates

Left Wilkeson on morning
of Aug 16 —

Aug. 18-

Reached Newcastle last evening. Presented my letter to C. C. Anderson, and looked over the mine. Did not go down.

Looked over the dump & found a very few plants, among them the curious monocotyledon sent in by Russell - Collected about 75 pounds of rather poor material. It comes from the mine 1000 feet in.

Went this afternoon to Coal Creek but found absolutely nothing. They are opening a new mine and are going through nothing but sand rock. The old dumps have long since burned out or are now burning -

Aug 19 -
Left Newcastle this am.
Waited over for 3 hours
for train to Franklin, Spent
the time at Renton in visiting
the mine above town. They are
going through sand rock
and moreover the dump is
burning fiercely, so as a re-
sult found nothing.
Was told of a shell bed
up the track some dis-
tance but was prevented
by rain from going to
do.

Reached Franklin at
12 m.
Visited mine 7 now being
opened above the town.
Found a few pieces of rock
on the dump containing stems
and branches but no leaves
or determinable material

was assured by the men about the mine that they had never noticed plants there.

Aug. 20. (Locality 1)

Went down with the Curran of Grumkin at the pump house this morning. Found a splendid big slab of rock and collected a large number of beautifully preserved leaves. How many leaves of Ulmus, the two or three species, there described. Also got a number of beautiful new things, among them a fine fern in fruit, a Dryopteris.

This bed is about 100 or 150 feet above vein #11.

Aug 21-

(Locality 3) In company with Williams who was with Willis, visited & collected from Pine X. We got a fair representation of the flora, an Ulmus similar to the one at pumphouse and a number of other things some of which are new

In afternoon went to locality — about 100 yds below the fossil tree in the bluff below the county bridge. Found an enormous number of most beautifully preserved leaves. Made a full collection & brought them out. Among them is the Ulmus, a new Populus of the tremuloides type, two or three species of Ficus, Sapindus, Leguminosites, Rhus et. al.

Aug 22

This afternoon worked vein X11, and procured about 100 pounds of fairly good material. The leaves are very abundant and it is rather hard to get out perfect material. Succeeded in getting perhaps a dozen species, among them are Ulmus, Cornus, Rhus etc. Some of which are found in the McKay vein.

Aug. 24 -

Reached Black Diamond at noon. Immediately after dinner started for the Black Diamond mine spending an hour or two looking over the rock dump. Found traces of leaves but only one perfect one, that being the species of Ulmus common in the McKay vein.

This mine is being worked out. They began on the back of the vein and are working it out clean as they go. It is about 2000 feet in.

Also visited the Lawson mine about 3/4 of a mile above the town. On the rock dump found a few plants. Collected perhaps a dozen species one of the commonest being the Ulmus of the McKay vein. Also found Ulmus fruits. The first I have seen.

Aug 25

Spent the morning in work on the Lawson mine getting a fair collection and representation of the flora. In conversation with the owner of the mine, Mr. Lawson, was informed that the plants came from 15 or 20 feet above the coal they are now working.

Also went up the hill about half a mile to where a new slope is being sunk to meet the old mine. It is being put down at an angle of 65° and is now down 165 feet. Nothing but impure coal is being taken out. Could not get a trace of plants.

In the afternoon visited what is called the new slope of the Black Diamond mine & found

— Boxes sent in 1898 —

1-4	Liberty, Wash.	lbs. 410.
5-8	Roslyn. (No 4) —	375.
9-	Burnett — (No 4) —	120.
10-13	Carbonado —	325
14-15	Wilkeson - - - -	170
16-20	Franklin - - -	400
21-	Black Diamond	100
22-	Renton Wash —	100